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Remarks of John F. Clark
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Before the Public Service Commission of SC
Workshop – Electric and Natural Gas Conservation and Efficiency
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The South Carolina Energy Office appreciates the opportunity to participate in the Public Service Commission Workshop on Electric and Natural Gas Conservation and Efficiency.

The South Carolina Energy Office is a small, federally-funded unit of the State Budget and Control Board with a mission of increasing energy efficiency and diversity, reducing environmental problems resulting from energy use, and saving energy dollars for South Carolinians. We perform this mission through technical assistance, energy conservation loans, training workshops, energy information and education programs, policy analysis and recommendations, and a variety of outreach and advisory activities. We often work in close cooperation with utilities, the Office of Regulatory Staff, the Department of Health and Environmental Control, the Department of Commerce, and numerous other public and private entities.

The responsibilities of the South Carolina Energy Office were officially established by the South Carolina Energy Conservation and Efficiency Act of 1992, the same law that created statutory requirements pertaining to utility integrated resource planning and demand-side management reporting.

Because of our unique role in the state, my testimony focuses on the last two items of this workshop's list of issues:

- The need to encourage conservation/efficiency programs among South Carolina's electricity consumers; and
- Foreseeable issues as a result of effective conservation/efficiency programs in South Carolina for consumers and for utilities.

We fully understand the responsibility of our electric utilities to provide highly reliable electric power service at lowest possible costs, and we appreciate the long and successful track record of electric utilities in South Carolina providing affordable, reliable power to the citizens of our state. We also appreciate the work of the Public Service Commission through all the years in working with the investor-owned utilities to maintain South Carolina's system of reasonably-priced, reliable electricity.

Utilities and regulators must, of course, continue their efforts to ensure that supply of electricity exceeds demand for electricity by a reasonable margin, and that the electricity is provided at the lowest cost possible consistent with the need for reliability. We do, however, suggest that utilities and regulators consider adjustments in the paradigms used (1) to consider supply and demand balance, and (2) to consider costs.

Historically, consideration of supply and demand balance has focused on projecting demand, which is then used as an independent variable upon which to base decisions for increasing supply. Supply and demand are kept in balance by continually increasing supply to meet continually revised projections of demand.

We suggest that demand reduction be considered as an option equal to supply increase, when considering the need to balance demand and supply. For example, a projection might show a need for an increase in supply of 500 megawatts of power. One way to maintain balance would be to build a new facility that adds 500 megawatts of supply. A more attractive option might be to make investments in customer efficiency that reduce demand by 500 megawatts.

Either method achieves a new balance in supply and demand, but the demand reduction option has potential added benefits of lower power bills and less adverse impact on the health of citizens and the economy of the state.

We need for utilities to treat conservation, load management and efficiency as a resource equal to or preferable to construction of new power plants. When it is more cost-effective for citizens of South Carolina if utilities reduce demand for 500 megawatts rather than build, operate, maintain and buy fuel for a 500-megawatt plant, then utilities should adopt the demand reduction option.

What are the obstacles to the goal of utilities giving demand-side management options consideration equal to that given to supply-side options? The obstacles are in two main categories:

- (1) Utilities face a conflict with their obligation to maximize profits for investors if financial rewards for building and operating power plants are greater than financial rewards for reducing power demand.
- (2) In most cost-benefit analyses comparing costs of building and operating new plants to costs of implementing demand-side measures, many of the societal costs to citizens of South Carolina are excluded from the cost-benefit analyses. This exclusion of external costs to society results in results in situations where true full costs of new power plants are under-calculated and thus inaccurately determined to be lower than costs of some viable demand-side options.

There are solutions to overcome both obstacles, if there is sufficient will to achieve greater energy conservation and efficiency.

With regard to the issue of the conflict between reducing energy consumption and adequately rewarding stockholders, the solution is to decouple utility profits from construction of power plants and sale of power. Fair decoupling procedures are complex, but there are many models around the nation that can serve as templates. Regulators need to

- (a) allow a return on investments in conservation and efficiency equal to or greater than return on investments in construction of new power plants; and
- (b) regulators need to adequately compensate utilities and their stockholders for reduced profits resulting from lower electricity sales due to conservation and efficiency measures.

Creative regulation can result in a situation where consumers pay lower utility bills because their use of electricity is substantially decreased, while utilities can earn equal or greater profits through investments in conservation and efficiency and greater profit margins allowed on the lower quantities of power sales. We believe a financial win-win situation with regard to demand-side management is possible if consumers, utilities and regulators decide to work together to make demand-side management the preferred option.

More complicated, but no less important, is the issue of cost-benefit methodology in determining *which* demand-side options are more advantageous to citizens than supply-side options. We believe that regulators should consider the following new approaches to cost-benefit analysis:

- (a) Consider total costs of bills, rather than only rates as measured in cents per kilowatt hour. Consumers are most concerned about their total bills and typically pay little attention to the price per kilowatt hour. Some demand-side solutions could result in slightly higher rates, but lower bills, because consumption is reduced. The goal should be lower bills, which are a function of both price and consumption, rather than simply a function of price. In fact, South Carolina is now in the ironic situation of having electricity rates that are lower than the national average, but having average electric bills that are among the highest in the country, due to exceptionally high consumption. There is nothing wrong with current electricity rates in South Carolina, but consumption appears to be excessive and we do need to find ways to cut electricity bills.
- (b) When considering supply-side options, regulators should consider all costs to society, not just price per kilowatt hour charged to ratepayers. Ratepayers in South Carolina are also citizens in South Carolina, and state regulators should look out for the environmental and economic well-being of the citizens of this state in a broad, comprehensive manner. The *true* cost of providing power from a coal-fired power plant is more than the cost of building, operating, maintaining and purchasing fuel for the plant. It is also the increased health cost to citizens resulting from airborne emissions; it is the cost to forest owners from acid rain; it is the cost of lost value to citizens of lakes and rivers contaminated by mercury; it is the incremental cost to society of global warming. All of these costs can be quantified, and they *should* be quantified when comparing supply-side options to demand-side options. Demand-side options are attractive precisely because they have fewer societal costs and many societal benefits. Society is composed of ratepayers, and society pays all of the costs, including the environmental costs; therefore, all of the costs should be identified, quantified and inserted into all cost-benefit analyses. External environmental costs to society should not be excluded. Only when all costs are considered is it fair and reasonable to compare costs of supply-side options with costs of demand-side options. At that point, regulators will have all the information needed to choose the options that are least costly for society.
- (c) When considering costs of supply-side options, regulators should adequately consider a full range of life-cycle cost scenarios. Regulators should consider the cost of constructing power plants, building necessary transmission infrastructure, operating the power plants, maintaining the power plants and transmission infrastructure, and buying fuel for the power plants for the expected life of the power plants, which is thirty years at an absolute minimum. Regulators should obtain analyses of all reasonable possible scenarios relating to future costs of coal and coal-fired power production, including likely future emissions standards and penalties for carbon emissions. It is true that such costs cannot be precisely predicted. It is not true that absence of measurement precision should mean that such future costs should be ignored. At minimum, regulators should examine scenarios that assume much greater increases in the cost of using coal to produce power than would be projected simply by using historical trends. Because of increased national concerns

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about greenhouse gasses and global warming, it is unlikely that past patterns of costs of production of power from coal will be accurate predictors of future costs of production of power from coal.

Finally, we encourage the Public Service Commission to consider establishment of a Public Benefit Fund resulting from a surcharge sometimes known as a System Benefits Charge to pay for the costs of certain public benefits such as low-income conservation assistance and large-scale demand-side reduction programs in all consuming sectors, including residential, commercial and industrial. About half the states in the nation already have some form of public benefits programs. It may be time for South Carolina to get on board. A modest charge of one-tenth of one cent per kilowatt hour would have negligible impact on utility bills, but could generate \$50-75 million annually for programs designed to reduce energy costs, reduce energy-related pollution, and improve the state's economy.

One of the reasons it is so important for South Carolina to conserve is that we produce no coal, no natural gas, and no uranium. Every expenditure diverted from purchase of fuels for conventional power plants could be used for other consumption and expenditure options that are more beneficial to the economic well-being of the citizens of South Carolina.

Thank you for your consideration of our thoughts.